

FIG. 1

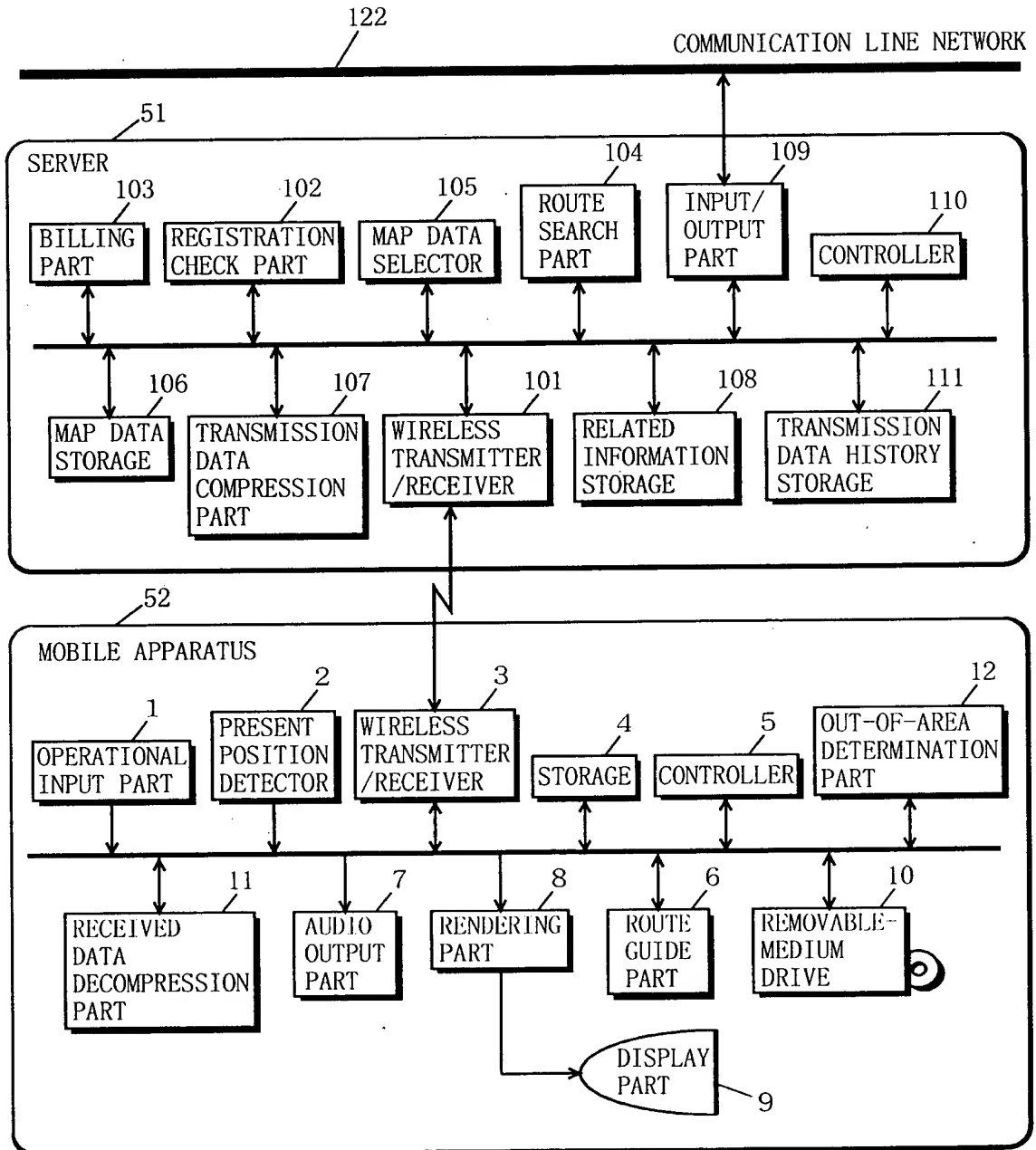




FIG. 2A

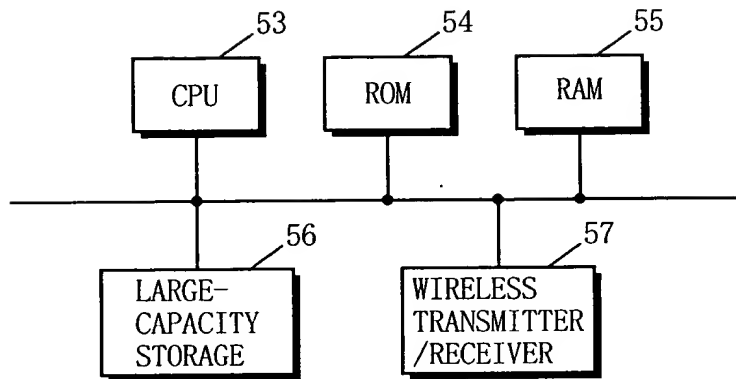


FIG. 2B

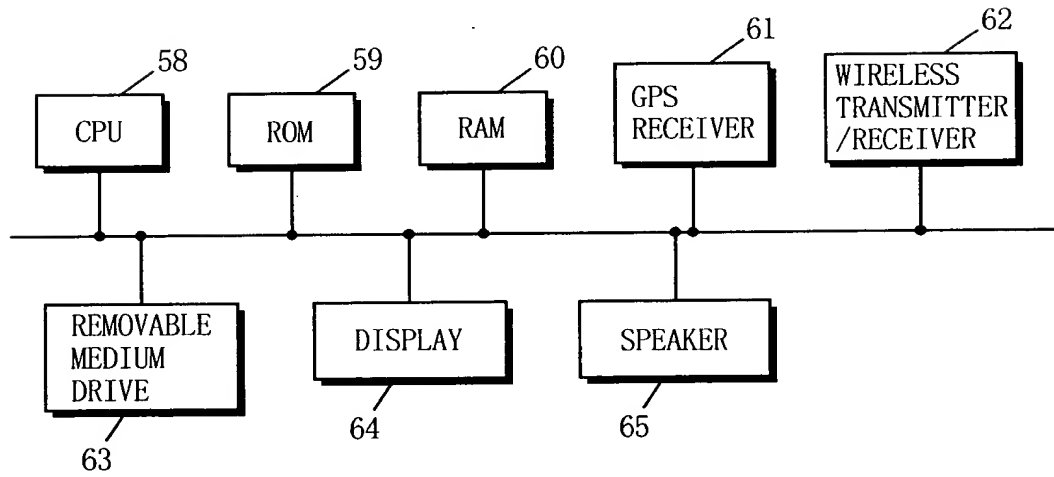




FIG. 3A

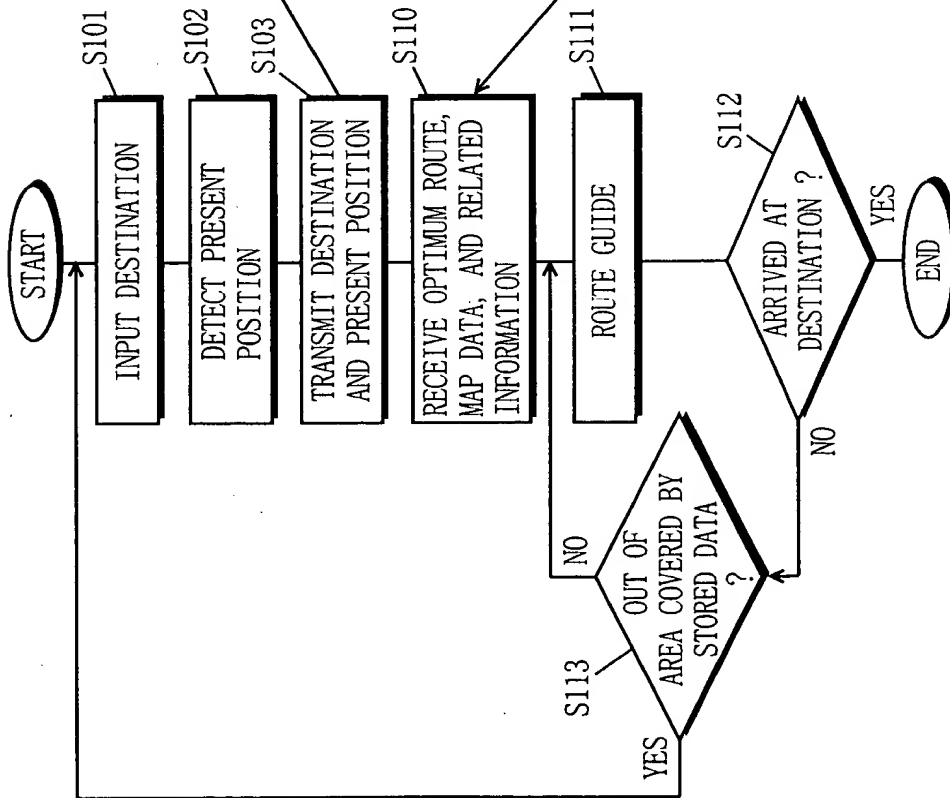
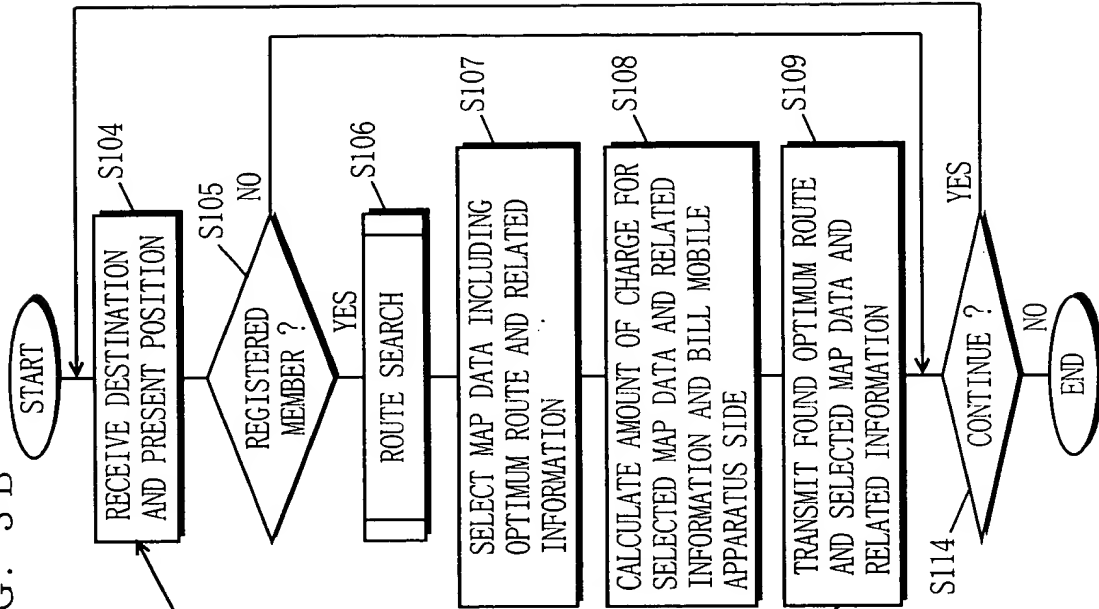


FIG. 3B





F I G . 4

REGISTRATION IDENTIFIER	PRESENT POSITION OR STARTING POINT	DESTINATION	OPTIMUM-ROUTE SEARCH METHOD IDENTIFIER	RELATED INFORMATION REQUIREMENT IDENTIFIER
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FIG. 5

REGISTRATION IDENTIFIER	REGISTERED DATA TYPE	DATA AMOUNT	CHARGE AMOUNT	FREQUENCY OF LOG-IN	TOTAL DATA AMOUNT	TOTAL BILLING AMOUNT



FIG. 6

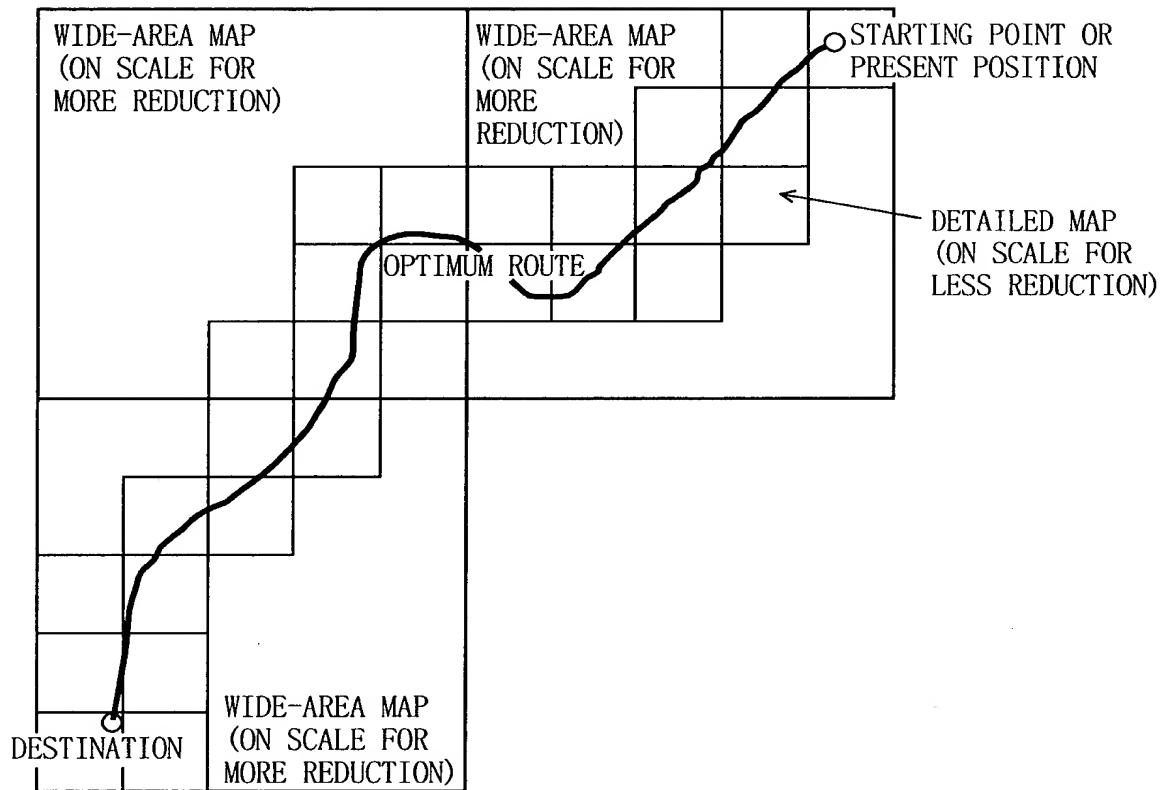




FIG. 7A

INFORMATION TYPE	UNIT PRICE
MAP DATA	10 YEN/SHEET
RELATED INFORMATION	TRAFFIC JAM
	50 YEN/AREA
	EVENT/ DISCOUNT SALE
	20 YEN/AREA
	SIGHTSEEING INFORMATION
	10 YEN/AREA

FIG. 7B

INFORMATION TYPE	UNIT PRICE
MAP DATA	10 YEN/1MB
RELATED INFORMATION	TRAFFIC JAM
	50 YEN/1KB
	EVENT/ DISCOUNT SALE
	20 YEN/1KB
	SIGHTSEEING INFORMATION
	10 YEN/1KB



FIG. 8A

INFORMATION TYPE	THE NUMBER OF SHEETS OR AREAS	PRICE
MAP DATA	2	20 YEN
TRAFFIC JAM	2	100 YEN
RELATED INFORMATION	EVENT/ DISCOUNT SALE	—
	SIGHTSEEING INFORMATION	20 YEN
TOTAL CHARGE		140 YEN

FIG. 8B

INFORMATION TYPE	INFORMATION AMOUNT	PRICE
MAP DATA	2MB	20 YEN
TRAFFIC JAM	1.5KB	75 YEN
RELATED INFORMATION	EVENT/ DISCOUNT SALE	—
	SIGHTSEEING INFORMATION	30 YEN
TOTAL CHARGE		125 YEN



F I G. 9

PUBLIC KEY	BILLING INFORMATION	COMPRESSED TRANSMISSION DATA
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FIG. 10

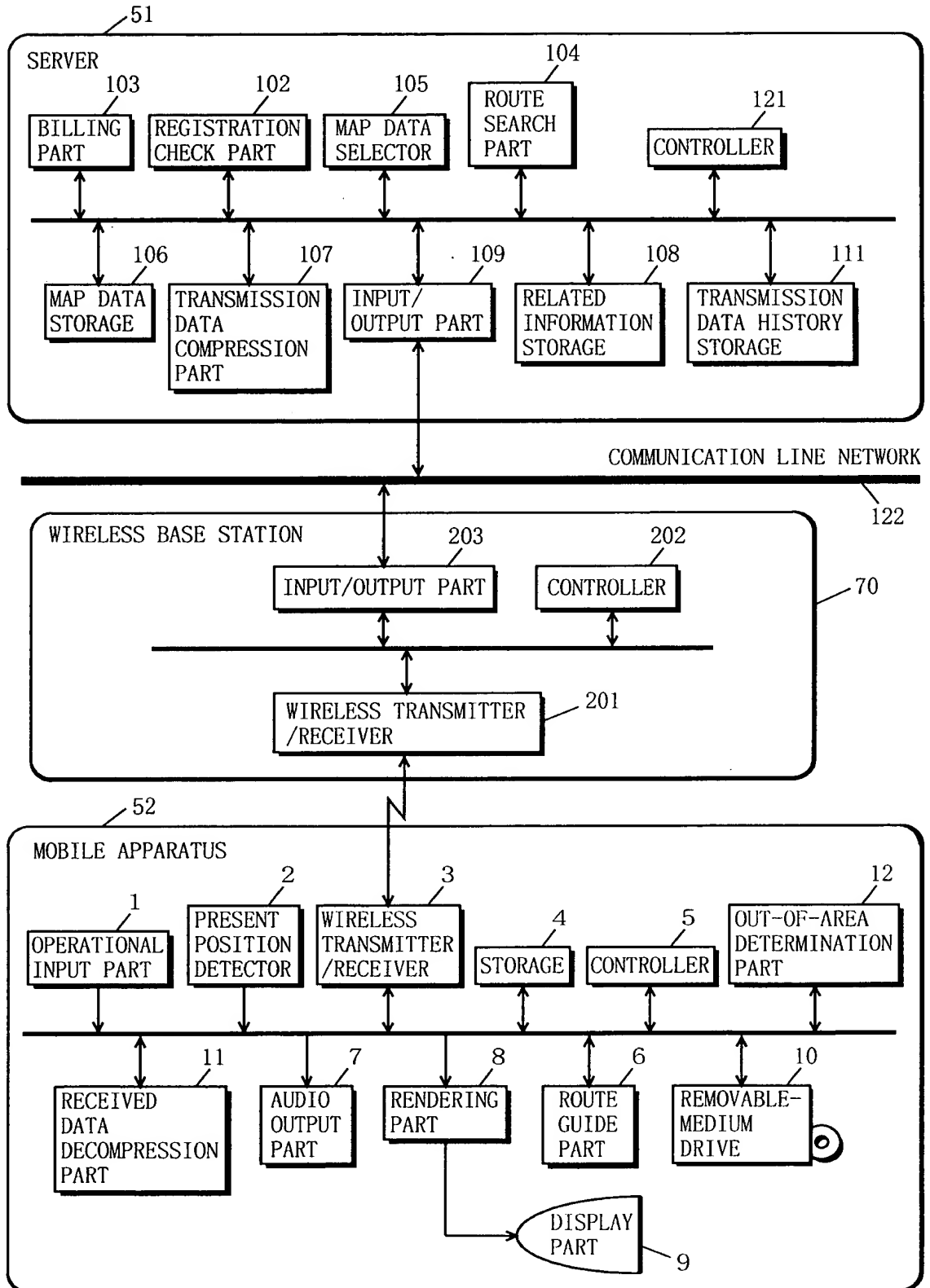




FIG. 11

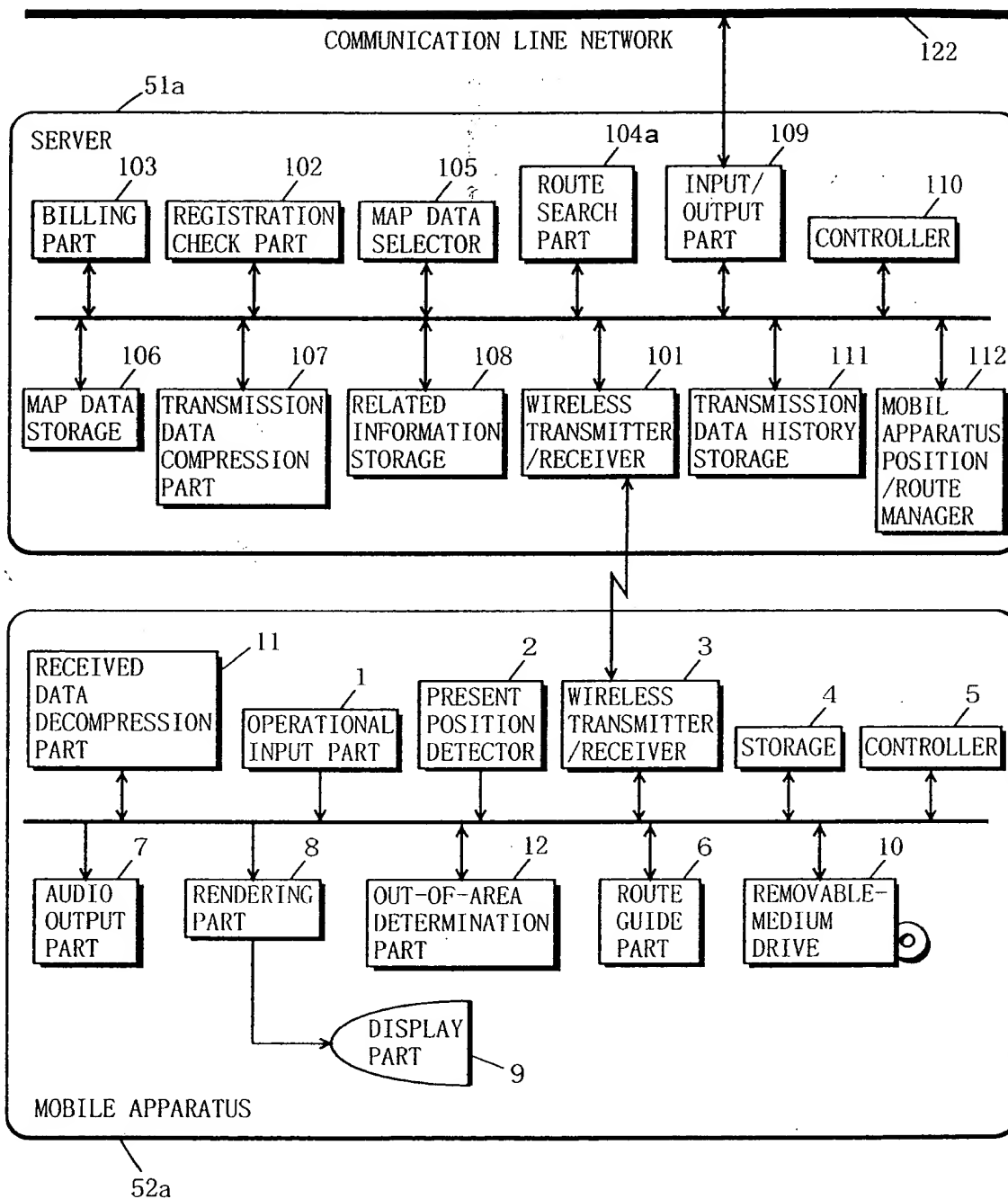




FIG. 12C

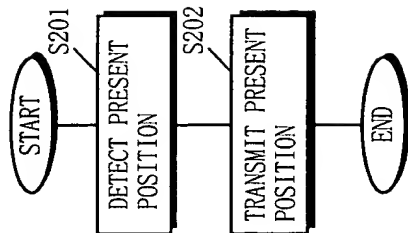


FIG. 12B

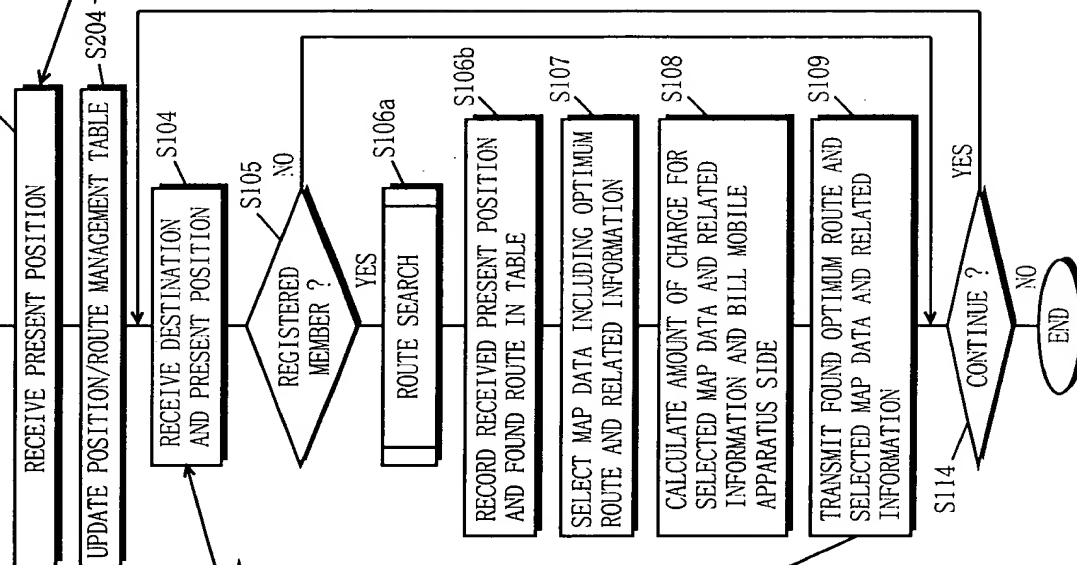
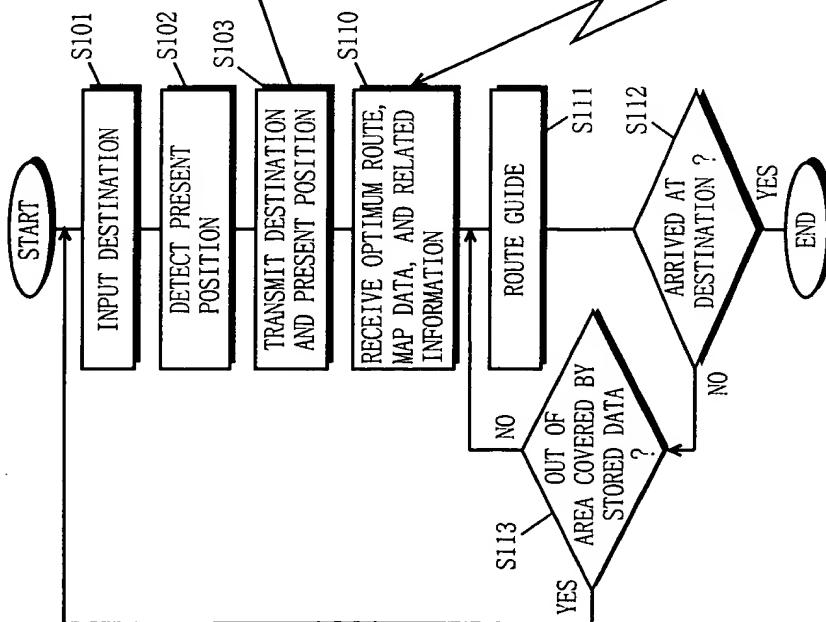


FIG. 12A





F I G. 1 3

PUBLIC KEY	COMPRESSED TRANSMISSION DATA
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F I G. 1 4

	PRESENT POSITION	FOUND ROUTE
MOBILE APPARATUS 1		
MOBILE APPARATUS 2		
⋮		



FIG. 15

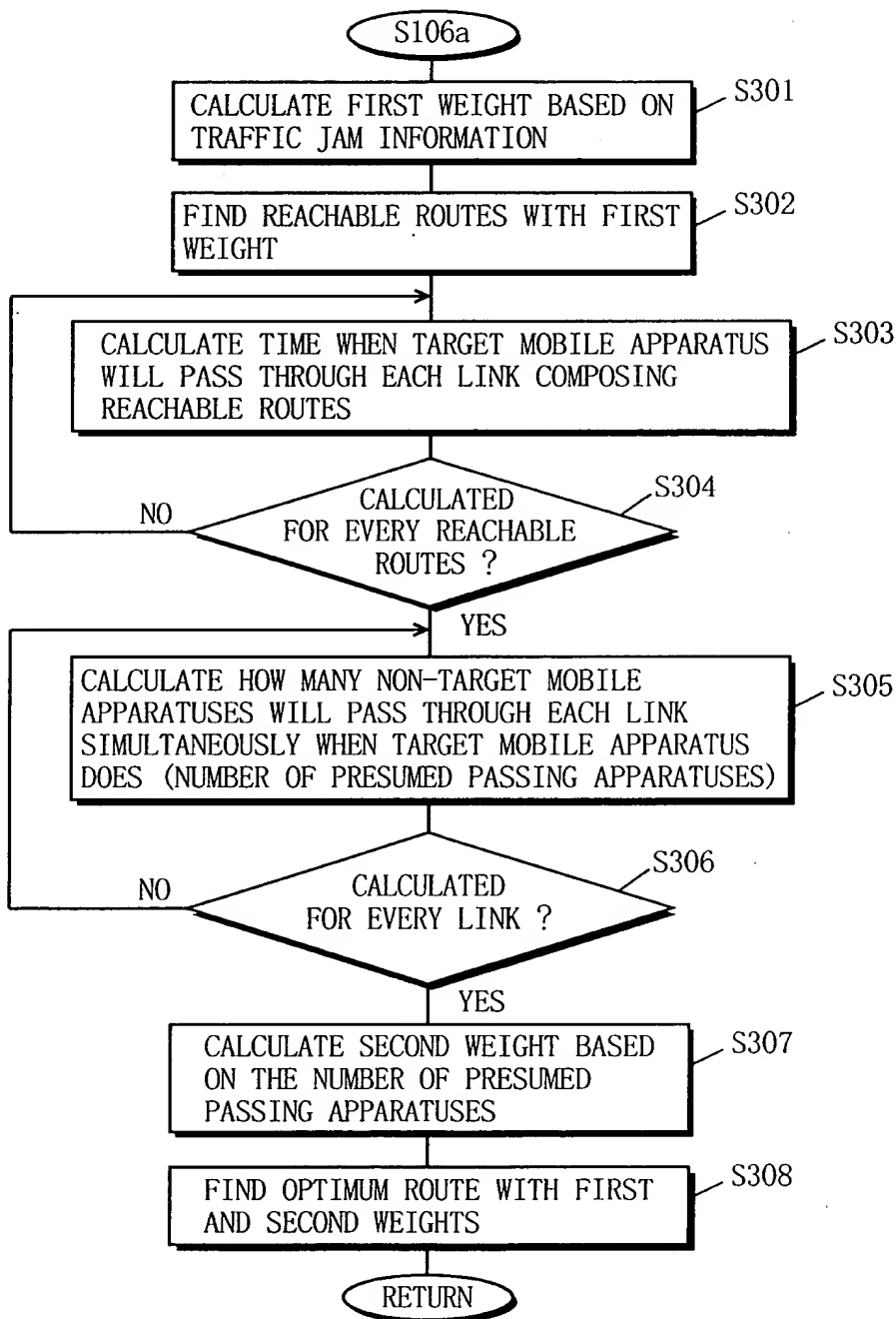


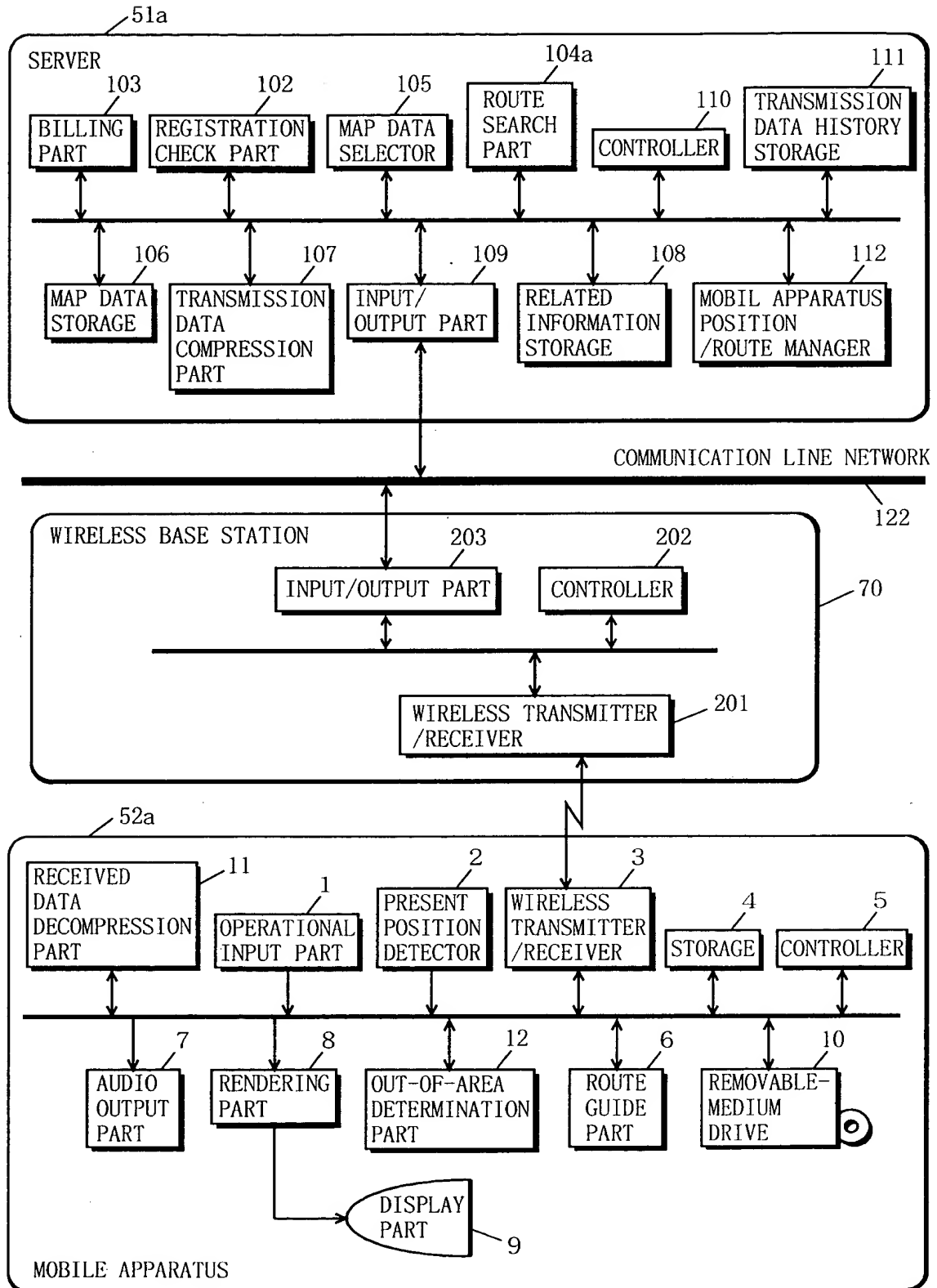


FIG. 16

ROUTE FOR NON-TARGET MOBILE APPARATUS		3+a0+b0	3+a1+b1	5+a2+b2	T0'		
1	2	2+b3	4+b4	2	4		
		ROUTE FOR NON-TARGET MOBILE APPARATUS		6	2	3+b5	3+a4
					2+a3	3+b6	
	2	3	2	3	4	3	
dij = 3+aij+bij		S	1	2	2	2	3
			2	2	2	2	
		2					



FIG. 17



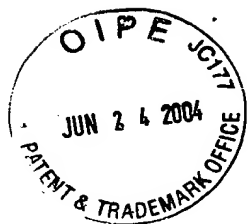


FIG. 18 PRIOR ART

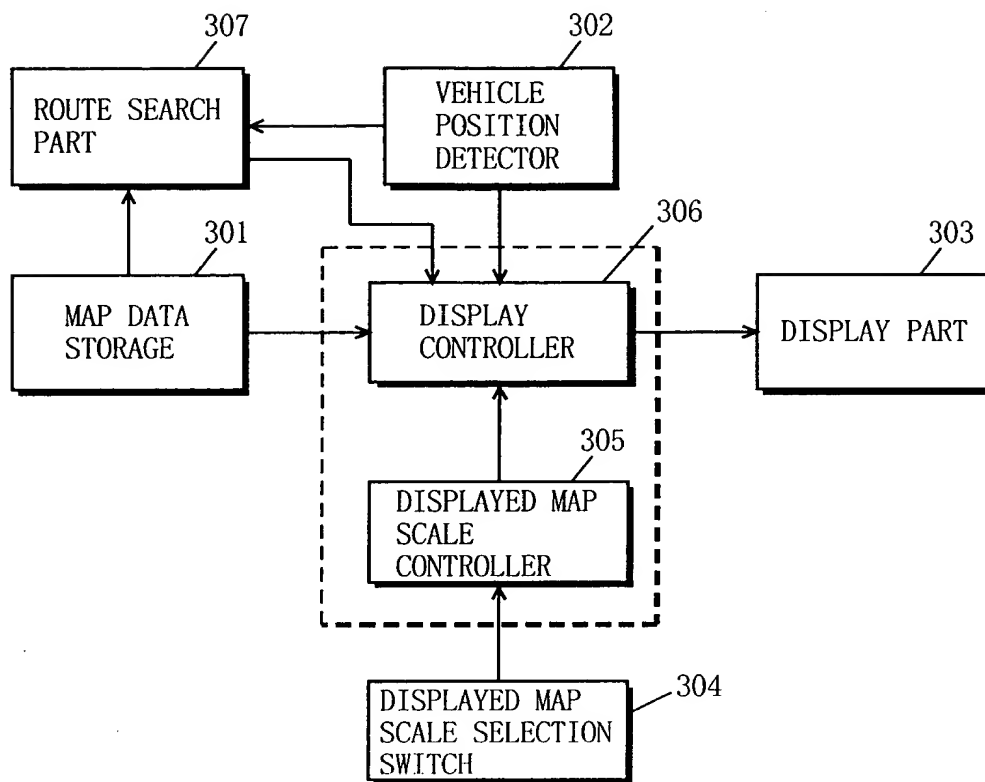




FIG. 19 PRIOR ART

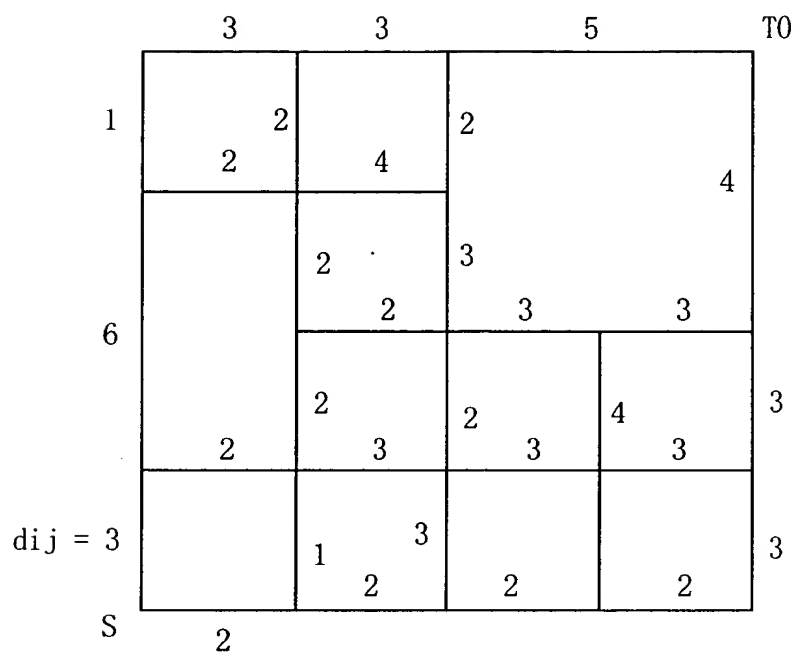


FIG. 20 PRIOR ART

